難関国公立大 英語 ＜読解編＞

この講座は，旧帝大レベルの難関大学を志望する生徒のための講座です。このテキストのほぼ全ての問題が，旧帝大で実際に出題された問題を使用しています。

直前講習でも変わらず重要なのは，根本の英語力を底上げすること。それには，予習→授業→復習のサイクルと，復習の際の音読 10 回と単語の暗記です。

肘井 学

目 次

第１講 難関国公立大英語長文①	p2
第２講 難関国公立大英語長文②	p10
第３講 難関国公立大英語長文③	p18
第４講 難関国公立大英語長文④	p26

第１講 難関国公立大英語長文①

次の英文を読んで，設問Ａ～Ｇに答えなさい。

Since time beyond memory walking has been the primary mode of human locomotion. Since the very beginning, walking and being human have (あ). On foot humans crossed the earth, experienced life, and defined their relationship to the environment. On foot they carried their children, supported their old, hauled their tools and goods, and herded their animals. Similarly, they fled, chased, and killed, hunted and gathered, sought food, water, fuel, and habitat, traveled, played, courted, and enacted their defining rituals. For millions of years our close and distant ancestors moved across history on foot, bringing truth to the notion that (1)<u>we have walked our way to our being</u>.

(2)<u>With as much as half of human time and bodily energy dedicated to walking and related physical activities such as running, jumping, crawling, and climbing, changes in the conditions of walking altered lives and societies</u>. Many such changes occurred in the vast period of prehistory, reaching from the first steps and early migrations of our first bipedal (two-footed) ancestors to the agricultural revolution and the emergence of river-valley civilizations about ten thousand years ago.

These civilizations in the Indus, Tigris and Euphrates, and Nile river valleys marked a profound transformation in elements of human walking. The main features of these civilizations—a fixed place, an annual food supply,

domesticated beasts of burden, specialization in tool making, storage, utilization of the wheel, command of a river, and dominance of major trails and routes—were all factors that shaped who went on foot and why, where, and when they did so.

NOTE

Of all early civilizations, the Roman empire, at the high point of its thousand-year history, reached furthermost in space. (3) <u>Its roads</u>, built mainly to project its army's power and state authority, formed a system of movement that associated walking with smooth surfaces, greater carrying capacity, and unified routes of travel. Its system of land travel, which utilized oxen, horses, and carts, but was based on and principally required walking, was not（　い　）in Europe until the eighteenth century. (4) <u>If walking set the common but variable standard of local human locomotion</u>, the marching speed and distance of Roman fighting forces set the upper limit of prolonged land travel and defined a type of domination unrivaled since humanity first trod the earth.

"In the beginning was the foot," wrote anthropologist Marvin Harris. The earliest hominid*1 species walked on two feet from two to four million years before a subsequent hominid species made tools, and from four to six million years before homo sapiens, our kind, appeared about a hundred thousand years ago. "Anthropologists and biologists are now agreed," science writer John Noble recently wrote, "that upright posture and bipedal walking was the crucial and probably first major adaptation associated with the divergence of our human lineage from a common ancestor with the African apes."

NOTE

Psychologist Robert Provine speculates that bipedalism permitted hominids to make fuller use of their breath and vocal cords*2, (5)<u>(①) (②) (③) (④) more complex (⑤) (⑥) (⑦) (⑧) (⑨) (⑩)</u>. Afoot, humans could carry many kinds of objects across immense distances, especially as they learned to make use of their heads, necks, shoulders, backs and waists. With startling effect, they could hit and throw, smash down, and kick. They could also reach and pick more efficiently, especially as their species developed a thumb that could be used in opposition to the index and middle fingers. Free hands (う) them to examine objects, make and utilize tools, and start, set, carry, and control fire. Each of these functions supported and reinforced one another.

Humans sacrificed a life in the trees to become bipedal earth dwellers. Afoot, humans could better exploit the environment, climbing hills, crossing wetlands, wading through ponds, and fording*3 streams, plus—weather permitting—traveling, as walking humans easily do, up to three miles per hour. (6)<u>Able to transport significant quantities of food, water, and goods, they could sustain themselves over considerable distances</u>. This mobility, which (え) the ability to carry children, haul tools, transport food, and later, lead animals, gave humans great migratory powers.

[Original from ‘On Foot: A History of Walking’ by Joseph Amato, © 2004 by New York University. Used with permission.]

*1　hominid：ヒト科

*2　vocal cords：声帯

*3　ford：（浅瀬など）を歩いて渡る

NOTE

A.（ あ ）～（ え ）のそれぞれの空所に当てはまる語として最も適切な語を下の１～４から選びなさい。ただし，いずれの番号も一回ずつしか使用できません。

1. allowed　　2. coexisted　　3. included　　4. surpassed

B. 下線部(1)に意味が最も近いものを下のア～エから選びなさい。

ア．it is through walking that we have become what we are

イ．walking through history, we have defined our rituals

ウ．we have come to be a walking animal

エ．we have walked along the paths of history in our own style

C. 下線部(2)を日本語に訳しなさい。

D. 下線部(3)が建設された目的を，本文に即して日本語 20 字以内で説明しなさい。ただし，句読点も文字数に含めます。

E. 下線部(4)に意味が最も近いものを下のア～エから選び，記号で答えなさい。

ア．In case walking set the common but variable standard of local human locomotion

イ．Perhaps walking set the common but variable standard of local human locomotion

ウ. Whether walking set the common but variable standard of local human locomotion

エ. While walking set the common but variable standard of local human locomotion

F. 下線部(5)の空所(①)～(⑩)を下の語ア～コで埋め，本文の内容に最もふさわしい英文を完成させるとき，空所(②)(④)(⑨)に入るものを記号で答えなさい。ただし，いずれの語も一回ずつしか使用できません。

ア. and	イ. animals	ウ. diverse	エ. enabling	オ. other
カ. produce	キ. sounds	ク. than	ケ. them	コ. to

G. 下線部(6)を日本語に訳しなさい。

第２講　難関国公立大英語長文②

We often hear about the need to find (1)alternative energy sources in order to protect our planet from the harmful effects of climate change. Wind, wave and solar energy are all possible sources, but most of the electricity produced from non-fossil fuel sources comes from nuclear power. Nuclear energy may be ‘clean’, that is, it does not produce as much carbon dioxide or other greenhouse gases as fossil fuel energy plants, but it is not a permanent energy solution. Like coal and oil, the amount of uranium on earth is limited, and nuclear energy may only be a viable source of energy for the next 100 years. The effects of nuclear energy production, however, are more long-lasting, and potentially more problematic, than any damage that has resulted or could result from fossil fuel-induced climate change: even though building design and technology have improved, nuclear power plants are still susceptible to accidents that can damage whole regions, even countries; they also produce waste that remains harmful to the biosphere for centuries.

In its 57-year history, the nuclear energy industry has so far generated a minimum of 300,000 tons of high-level nuclear waste. In order to be safe, this waste must be kept away from living creatures for at least 100,000 years. How do we dispose of this material safely? An example from Finland demonstrates some of the problems we face. The Finnish government is currently building a deep geological repository, a 5km-long tunnel that winds its way down 400m into the bedrock to a network of storage vaults. The

location is called ‘Onkalo’. It will be ready to store waste in 2020, and then sealed in 2120. The Finnish government intends that Onkalo will remain closed for 100,000 years.

NOTE

That’s a difficult prospect for architects. How do you design something that’s meant to last for such a long time? In 100,000 years, there will be little or no trace of our present civilization. Some of the oldest buildings on earth, the Egyptian pyramids, have been around only for about 3,000 years. Onkalo presents a difficult conceptual problem for humans: anatomically modern humans have been in existence for around 200,000 years, but think how different the first humans would have been. How would you communicate with them? How could you make them understand the world in which you live? What will humans be like in 100,000 years?

Since the material to be stored is so dangerous, the designers of Onkalo — and all nuclear nations that must build these structures, at great expense — have to think about these issues. How can we prevent humans from trying to excavate the site in the future, causing massive damage to their species and their environment? The designers could leave a warning sign, something like ‘This is a very dangerous place. Stay away. Do not try to enter.’ But how can we communicate with humans so far in the future? Which language would we use? English? Chinese? It’s probable that neither of these languages will exist in the year 102012. Language itself might have become (ア)<u>obsolete</u> by that time. How about using a picture? If so, what would it be?

NOTE

Alternatively, should we not leave any markers about the site’s dangers, and simply hope that Onkalo remains undiscovered? We must consider whether leaving a marker, even a warning, would make humans less or more curious to find out what’s there. We can think about the pyramids again. It’s clear that these were designed as burial structures, houses for the dead. They were not intended to be opened and explored, but (2)humans did so anyway. But even after around 200 years of excavation, our knowledge of the pyramids’ purpose is still incomplete, as is our understanding of the Egyptian hieroglyphic system of writing. Humans are by nature (イ)inquisitive: if we see something we don’t understand, we have a need to find out, even if our investigations are damaging towards ourselves and the environment. But (3)the destruction that could result if Onkalo were excavated in the future is much more extreme than simply rejecting the wishes of the dead or disrespecting their beliefs. In fact, if we don’t think of the right ways to manage the problem, there may not be any humans in the future to judge whether what we did was right or wrong.

［2012 年度　北海道大学］

NOTE

問 1 下線部(1)は何に対する alternative を指していますか。文中から英語 2 語からなるフレーズを抜き出して答えなさい。

問 2 原子力発電の問題点を第一段落から 3 つ抜き出し，簡潔な日本語で述べなさい。

問 3 下線部(2)は具体的にどのような内容を指しているのか，以下の英文を完成させて答えなさい。

Humans ____.

問 4 下線部(ア)と(イ)の英単語を置き換えるのに適切と考えられる別の英単語をそれぞれの選択肢(A)～(D)の中から 1 つずつ選び，記号で答えなさい。

(ア) obsolete:

(A) disused (B) diversified (C) standardized (D) visualized

(イ) inquisitive:

(A) cautious (B) curious (C) destructive (D) diligent

問５　下線部(3)を日本語に訳しなさい。

問６　この文章のタイトルとしてふさわしいものを次の(A)～(F)の中から２つ選び，記号で答えなさい。

(A) How We Can Prevent a Nuclear Plant Accident

(B) Learning from a Finnish Failure

(C) Managing the Nuclear Legacy

(D) Prospects of Post-Nuclear Energy Sources

(E) Will Nuclear Waste Outlive Us?

(F) The World in the Year 102012

第３講　難関国公立大英語長文③

次の英文を読んで，設問に答えなさい。

Accommodation theory states that when people talk to each other, they adjust their behaviour and manner of speech to take account of (to accommodate themselves to) the topic, the circumstances, and the other people engaged with them in the conversation. For two simple examples: people talk more slowly to foreigners, and use baby talk when interacting with infants. The way people communicate with each other is central to the kind of social interaction (ⓐ) issue. Thus, friends or lovers (and especially people in the process of becoming friends or lovers) make every effort to converge in manner, accent, tone and topic. ((i)), someone wishing to keep his distance or disagree will almost always adopt a manner of speaking expressly different from that of ①the other party.

These ideas matter because it is clear that the difficulties experienced by immigrants and foreigners everywhere arise in part from the difference of their speech mannerisms, and the limits to their ability to "converge" with native speakers when trying to communicate. ②As the world globalizes further at an increasingly rapid pace, and as major migrations of people, especially from the southern to the northern hemisphere, continue, so the problems and too often the frictions increase: accommodation theory, (ⓑ) all its surface simplicity, gives insights into how miscommunication and misinterpretation happen and how matters can be improved.

NOTE

Communication difficulties do not only affect immigrants and foreigners everywhere. They affect our own fellow-citizens. Social expectations and beliefs about class, intelligence and status are influenced by accent and other speech mannerisms, and therefore certain people from certain classes or regions can be disadvantaged when seeking jobs (especially away from their home localities) by the methods of communicating they learned when young.

Lack of accommodation is thus the source of problems for members of any group identified in given circumstances (Ⓒ) an out-group of some kind.

Accommodation theory was devised in the early 1970s by Howard Giles, whose first insights into communication came while working in a medical clinic in Wales, his native country. He wrote, "The patients I took to the physicians just had to open their mouths and speak and ③I could predict the manner in which the physicians were going to deal with them." The ideas he developed have been applied by advertisers and party-political researchers in thinking about the most effective ways of getting messages across to target audiences, and by business management trainers advising clients on how to behave in foreign countries.

NOTE

The limits of accommodation are illustrated by ④<u>the latter</u>. Studies found that efforts made by Western businessmen who over-accommodated in order to please potential clients or partners among Japanese businessmen were in fact counterproductive. The （ (ii) ） is that behaviour which appears to involve mimicry of another can look like mockery, or at very least appear condescending; in the Japanese case, the businessmen from Japan preferred the foreigners to be foreigners — and thus, presumably, to meet their own expectations and to conform to their own planned mode of interaction.

Accommodation theory is （ ⓓ ） particular value for, among other things, thinking about ways of integrating immigrant communities into host communities, where "integration" is a term neutral between assimilation and multiculturalism, and just means providing a way for immigrants to get along with the host community while succeeding economically. With mass immigration has come the （ (iii) ） that it is ineffective to expect immigrants to do all the accommodating; and that has resulted in host community adjustments to take account of linguistic and cultural factors in front-line provision of health care, education, social work, policing and legal services.

[From '*Ideas That Matter* by A. C. Grayling c/o Felicity Bryan Associates Ltd; Copyright © 2010 by A. C. Grayling.]

NOTE

設問(1) 本文中の空所ⓐ～ⓓを埋めるのに最も適当な語を，(イ)～(ホ)から一つ選びなさい。同じ語を二度選んではいけません。

(イ) as　(ロ) at　(ハ) for　(ニ) of　(ホ) on

設問(2) 本文中の空所(ⅰ)～(ⅲ)を補うのに最も適当な一語を，(イ)～(ニ)から一つ選びなさい。

(ⅰ) (イ) Accordingly　(ロ) Conversely
(ハ) Eventually　(ニ) Occasionally

(ⅱ) (イ) advantage　(ロ) aim
(ハ) danger　(ニ) hope

(ⅲ) (イ) dream　(ロ) misunderstanding
(ハ) realization　(ニ) superstition

設問(3) 本文中の下線部① the other party の意味を日本語で表しなさい。

設問(4) 本文中の下線部②の意味を日本語で表しなさい。

設問(5) 本文中の下線部③の意味を日本語で表しなさい。

設問(6) 本文中の下線部④ the latter が指し示す内容を日本語で説明しなさい。

設問(7) 本文の内容に合っているものを(イ)～(ホ)から一つ選びなさい。

(イ) 移民の経済的成功には家庭内でのコミュニケーションが重要である。

(ロ) 日本人のビジネスマンは外国人にも日本式の振る舞いを期待する。

(ハ) Howard Giles は理論の着想を広告や政党の研究から得た。

(ニ) 調査の結果，相手に合わせすぎるのは逆効果の場合もあることがわかった。

(ホ) accommodation theory は移民や外国人の居住問題に焦点をあてる。

第４講　難関国公立大英語長文④

次の英文を読んで，下記の設問に答えよ。

Many people listen to music while they’re carrying out a task, whether they’re studying for an exam, driving a vehicle or even reading a book. Many of these people argue that background music helps them focus.

Why, though? When you think about it, that doesn’t make much sense. Why would having two things to concentrate on make you more focused, not less? Some people even go so [ア] as to say that not having music on is more distracting. So what’s going on there?

It’s not clear why the brain likes music so much in the first place, although it clearly does. Interestingly, there’s a specific spectrum of musical properties that the brain prefers. Experiments by Maria Witek and colleagues reveal that there needs to be a medium level of syncopation* in music to elicit a pleasure response and associated body movement in individuals. What this means in plain English is: music needs to be funky, but not too funky, for people to like it enough to make them want to dance.

Your own experience will probably back (1) <u>this</u> up. Simple, monotonous beats, like listening to a metronome, aren’t really entertaining. They have low levels of syncopation and certainly don’t make you want to dance. [イ] contrast, chaotic and unpredictable music, like free jazz, has high levels of syncopation, can be extremely off-putting and rarely, if ever, entices people to dance.

The middle ground hits the sweet spot between predictable and chaotic, for

which the brain has a strong preference. Most modern pop falls somewhere within this range, no doubt.

NOTE

Why would music help us concentrate, though? One argument is to do with attention.

For all its amazing abilities, the brain hasn't really evolved to take in abstract information or spend prolonged periods thinking about one thing. We seem to have two attention systems: (2) a conscious one that enables us to direct our focus towards things we know we want to concentrate on and an unconscious one that shifts attention towards anything our senses pick up that might be significant. The [あ] one is simpler, more fundamental, and linked to emotional processing rather than higher reasoning. It also operates faster. So when you hear a noise when you're alone at home, you're paying attention to it long before you're able to work out what it might have been. You can't help it.

The trouble is, while our [い] attention is focused on the task in hand, the unconscious attention system doesn't shut down; it's still very much online, scanning for anything important in your peripheral senses. And if what we're doing is unpleasant or dull - so you're already having to force your attention to stay fixed on it — the [う] attention system is even more potent. This means that a distraction doesn't need to be stimulating to divert your attention on to something else.

Have you ever worked in an open-plan office and been working on a very important task, only to be driven slowly mad by a co-worker constantly sniffing, or sipping their coffee, or clipping their nails? Something quite innocuous* suddenly becomes much more infuriating when you're trying to work on something your brain doesn't necessarily enjoy.

NOTE

Music is a very useful tool in (3) such situations. It provides non-invasive noise and pleasurable feelings, to effectively neutralise the [え] attention system's ability to distract us. It's much like giving small children a new toy to play with while you're trying to get some work done without them disturbing you.

However, it's not just a matter of providing any old background noise to keep distractions at bay. A lot of companies have tried using pink noise — a less invasive version of white noise — broadcasting it around the workplace to reduce distractions and boost productivity. But views on the effectiveness of this approach are mixed at [ウ].

It seems clear that the type of noise, or music, is important. This may seem obvious: someone listening to classical music while they work wouldn't seem at all unusual, but if they were listening to thrash metal it would be thought very strange indeed.

While the nature and style of the music can cause specific responses in the brain, some studies suggest that it really is down to personal preference. Music you like increases focus, while music you don't impedes it. (4) Given the extreme variation in musical preferences from person to person, exposing your workforce or classroom to a single type of music would obviously end up with mixed results.

Music also has a big impact on mood — truly bleak music could sap your enthusiasm for your task. [A] is music with catchy lyrics. Musical pieces without words might be better working companions, as human speech and vocalisation is something our brains pay particular attention to.

[Does music really help you concentrate? by Dean Burnett, 20 Aug 2016, Copyright Guardian News & Media Ltd 2023]

*syncopation = musical rhythm in which the emphasis is not on beats that are normally emphasized

*innocuous = completely harmless

NOTE

問 1　下線部(1)(3)が表す内容を，日本語で述べよ。

問 2　下線部(2)(4)を日本語に訳せ。

問 3　空所[A]に入る次の語を最も適切に並び替えて英文を完成し，その英文の 2 番目と 5 番目に来る語を番号で書け。文頭に来るべき単語も小文字で示している。

① else　② look　③ for　④ to　⑤ something　⑥ out

問 4　空所[ア]～[ウ]に入る最も適切な英単語(1 語)を書け。

問 5　空所[あ]～[え]に入る最も適切な語を下から選び、番号で答えよ。同じ語を繰り返し用いても良い。

① conscious　② unconscious

第１講　解答

＜解答＞

A.（あ）2　（い）4　（う）1　（え）3

B. ア

C. 全訳の下線部(2)を参照。

D. ローマ帝国の軍事力と権力を誇示するため。

E. ア

F. ② ケ　④ カ　⑨ オ

G. 全訳の下線部(6)を参照。

＜全訳＞

記憶にないほど昔からずっと, 歩行は人類の主要な移動手段であった。その起源から, 歩くことと人間であることは共存していた。人類は歩いて地上を横断し，生活を送り，自然環境との結びつきを定義していた。人類は子供たちを抱えて歩き，高齢者を支えて歩き，道具や品物を引いて歩き，家畜を連れて歩いた。同様に，人類は逃げて，追いかけて，殺生をしたり，狩りや食糧採集をしたり，食料，水，燃料，住居を求めたり，移動して，遊んで，求愛して，人類を特徴づける儀式を行ったりしていた。何百万年もの間，私たちの近い祖先も遠い祖先も，歩くことで歴史を刻み人類への進化の道を歩んできたという考えに，真実味をもたらしている。

(2)人間の時間と身体エネルギーの半分も，歩くことやそれに関係する身体活動，例えば走ること，飛び跳ねること，這うこと，登ることに費やしてきたので，歩行条件が変化すると，生活や社会も変えてしまった。そういった多くの変化は，有史以前の広範な時代に起き，最初の二足歩行の祖先の初めの一歩と初期の移動から，およそ1万年前の農業革命や四大河文明の出現にまで至る。

インダス川，チグリス川，ユーフラテス川，ナイル川でのこうした文明は，人間の歩行の要素に重大な変革をもたらした。こうした文明の主な特徴―固定の住居，年間の食糧供給，荷役用の家畜，工具製作の専門化，貯蔵，車輪の利用，川の運用，そして主要な小道や道路の支配―はすべて，誰が歩いて行き，なぜ，どこで，いつそうしたのかを具体化する要素となった。

あらゆる古代文明の中で，ローマ帝国は，その1,000年の歴史の絶頂期に，最もそ

の領土を広げた。その道路は，主に軍隊の力や国家権力を投影するために建設されたが，歩行を，滑らかな表面，より優れた運搬力，そして一元化された移動経路と結びつけて考える移動のシステムを形成した。その陸の移動システムは，雄牛，馬，そして馬車を利用したが，歩くことが基礎にあり，大抵の場合歩くことを必要として，18 世紀までヨーロッパではそのシステムを越えるものはなかった。もし歩くことによってその土地の人間の共通だが可変な移動力の基準が定まるとすれば，ローマ軍の戦闘部隊の行進のスピードと距離によって長期におよぶ陸の移動の上限が定まり，人類が最初に地上を歩いて以来比類ない支配が明確に限定された。

「初めに足があった」と人類学者のマーヴィン・ハリスは書いた。最古のヒト科の種は，のちのヒト科の種が道具を作る 200 ～ 400 万年前に二足歩行していたが，それは約 10 万年前にホモサピエンスという我々の種が現れる 400 ～ 600 万年前のことである。科学作家のジョン・ノーブルは最近「人類学者と生物学者は現在，直立姿勢と二足歩行が，アフリカ類人猿と共通の祖先から我々人間の血統が分岐したことに関わる決定的でおそらく最初の主要な適応であった，ということで同意している」と書いた。

心理学者のロバート・プロヴィンは，二足歩行によって人類が呼吸や声帯をより十分に利用できるようになり，それによって人類は他の動物より複雑で多様な音を作り出すことができるようになったと推測している。人類は特に，頭，首，肩，背中，そして腰を利用できるようになると，徒歩で，非常に遠くまで様々なものを運ぶことができるようになった。びっくりするような効果で，人類は打つ，投げる，殴る，蹴ることができるようになった。また特に，人類が親指を人差し指と中指と向かい合って使用できるように発達させると，より効率よく手を伸ばし，そして拾えるようになった。自由な手によって，ものを調べること，道具を作って利用すること，そして火をおこし，火をつけて，持ち運び，コントロールすることができるようになった。こういった機能のそれぞれが，相互に支え強化し合った。

人間は，木上での生活を捨て，二足歩行の大地の住人になった。歩くことで，人間は環境をより活用することができて，丘に登り，湿地を横切り，池を歩いて渡り，川を歩いて渡り，それに加えて，天候が許せば，歩行する人間が容易にできるように最高時速 3 マイルで移動もできた。(6)かなりの量の食べ物，水，ものを運搬できたため，かなりの距離を持ちこたえることができた。子供を抱え，道具を車で運び，食べ物を運搬し，のちに，動物を率いる能力を含むこの移動能力は，人間に大きな移住力を手にもたらした。

第１講　重要語彙リスト　　＊一つ一つ何度も繰り返して，覚えてください

1	primary	主要な
2	mode	方法
3	locomotion	移動
4	haul	引いて移動させる
5	herd	移動させる
6	flee	逃げる
7	habitat	住みか
8	court	求愛する
9	enact	規定する
10	dedicated to	～に捧げられた
11	prehistory	有史以前
12	migration	移住
13	emergence	出現
14	mark	しるす
15	profound	重大な
16	element	要素
17	feature	特徴
18	domesticated beast	家畜
19	burden	荷物運び
20	storage	保管
21	command	自由に使う力
22	dominance	支配する力
23	trail	山道
24	empire	帝国
25	furthermost	最も遠い
26	authority	権威
27	associate A with B	A を B と結びつける
28	unify	統一する
29	oxen	雄牛
30	surpass	越える
31	march	行進する
32	prolonged	長期にわたる
33	anthropologist	人類学者
34	subsequent	後の
35	hominid	ヒト科
36	upright	直立の
37	divergence	分岐
38	lineage	血統
39	speculate	推測する
40	reinforce	強化する

第１講　音読用白文　　①　②　③　④　⑤　⑥　⑦　⑧　⑨　⑩

Since time beyond memory walking has been the primary mode of human locomotion. Since the very beginning, walking and being human have coexisted. On foot humans crossed the earth, experienced life, and defined their relationship to the environment. On foot they carried their children, supported their old, hauled their tools and goods, and herded their animals. Similarly, they fled, chased, and killed, hunted and gathered, sought food, water, fuel, and habitat, traveled, played, courted, and enacted their defining rituals. For millions of years our close and distant ancestors moved across history on foot, bringing truth to the notion that we have walked our way to our being.

With as much as half of human time and bodily energy dedicated to walking and related physical activities such as running, jumping, crawling, and climbing, changes in the conditions of walking altered lives and societies. Many such changes occurred in the vast period of prehistory, reaching from the first steps and early migrations of our first bipedal (two-footed) ancestors to the agricultural revolution and the emergence of river-valley civilizations about ten thousand years ago.

These civilizations in the Indus, Tigris and Euphrates, and Nile river valleys marked a profound transformation in elements of human walking. The main features of these civilizations—a fixed place, an annual food supply, domesticated beasts of burden, specialization in tool making, storage, utilization of the wheel, command of a river, and dominance of major trails and routes—were all factors that shaped who went on foot and why, where, and when they did so.

Of all early civilizations, the Roman empire, at the high point of its thousand-year history, reached furthermost in space. Its roads, built mainly to project its army’s power and state authority, formed a system of movement that associated walking with smooth surfaces, greater carrying capacity, and unified routes of travel. Its system of land travel, which utilized

oxen, horses, and carts, but was based on and principally required walking, was not surpassed in Europe until the eighteenth century. If walking set the common but variable standard of local human locomotion, the marching speed and distance of Roman fighting forces set the upper limit of prolonged land travel and defined a type of domination unrivaled since humanity first trod the earth.

"In the beginning was the foot," wrote anthropologist Marvin Harris. The earliest hominid species walked on two feet from two to four million years before a subsequent hominid species made tools, and from four to six million years before homo sapiens, our kind, appeared about a hundred thousand years ago. "Anthropologists and biologists are now agreed," science writer John Noble recently wrote, "that upright posture and bipedal walking was the crucial and probably first major adaptation associated with the divergence of our human lineage from a common ancestor with the African apes."

Psychologist Robert Provine speculates that bipedalism permitted hominids to make fuller use of their breath and vocal cords, enabling them to produce more complex and diverse sounds than other animals. Afoot, humans could carry many kinds of objects across immense distances, especially as they learned to make use of their heads, necks, shoulders, backs and waists. With startling effect, they could hit and throw, smash down, and kick. They could also reach and pick more efficiently, especially as their species developed a thumb that could be used in opposition to the index and middle fingers. Free hands allowed them to examine objects, make and utilize tools, and start, set, carry, and control fire. Each of these functions supported and reinforced one another.

Humans sacrificed a life in the trees to become bipedal earth dwellers. Afoot, humans could better exploit the environment, climbing hills, crossing wetlands, wading through ponds, and fording streams, plus—weather permitting—traveling, as walking humans easily do, up to three miles per hour. Able to transport significant quantities of food, water, and goods, they could sustain themselves over considerable distances. This mobility, which

included the ability to carry children, haul tools, transport food, and later, lead animals, gave humans great migratory powers.

第２講　　　　　　　　　　　　　　　　解答

＜解答＞

問１　fossil fuel

問２　(1）原子力の原料となるウラニウムが有限で，次の 100 年で枯渇する可能性があること。

(2）原子力発電所は広範囲に被害を及ぼしうる事故を起こす可能性があること。

(3）原子力発電所は，何世紀にもわたって生物圏に有害な廃棄物を生み出すこと。

問３　opened and explored the pyramids

問４　(ア）A　　（イ）B

問５　全訳の下線部を参照。

問６　C, E

＜全訳＞

私たちは，気候変動の有害な影響から地球を守るために，代替エネルギー源を見つける必要性についてよく耳にする。風力，波，そして太陽光エネルギーはすべて可能性のあるエネルギー源だが，非化石燃料から作り出される電力のほとんどが，原子力から生まれるものだ。原子力は「クリーン」であるかもしれない，すなわち，それは化石燃料エネルギーの発電所ほど大量の二酸化炭素や他の温室効果ガスを出さないが，それは永久的なエネルギーの解決策ではない。石炭や石油のように，地球上のウラニウムの量は限られており，原子力は次の 100 年存続可能なエネルギー源にすぎないかもしれない。しかしながら，原子力エネルギーの生産の影響は，化石燃料に起因する気候変動から生じている，あるいは生じうるどんな被害よりも長引き，潜在的に問題が大きい可能性がある。建築設計や技術は向上したが，原子力発電所は依然として，地域全体，ひいては国全体にも被害を及ぼしうる事故につながりやすく，また何世紀にもわたって生物圏に害として残る廃棄物を生み出す。

その 57 年の歴史で，原子力産業は，これまでに最低でも 30 万トンの高濃度な核廃棄物を生み出してきた。安全性のために，この廃棄物は少なくとも 10 万年は生き物から隔離されていなければならない。私たちはどうやってこの物質を安全に廃棄できる

のだろうか。フィンランドの例が，私たちが直面する問題の一部を示してくれている。フィンランド政府は現在，地中深くにある保管場所を建設しており，それは地下貯蔵室のネットワークまで岩盤を 400 メートルらせん状に下る，全長 5 キロメートルに及ぶトンネルである。その場所は「オンカロ」と呼ばれている。そこでは，2020 年に廃棄物を収容できるようになり，その後，2120 年に封鎖される予定だ。フィンランド政府は，オンカロは 10 万年間封鎖しておく意向である。

　それは建築家には難しい見通しである。どうやってそのような長期間もつように意図されたものを設計するだろうか。10 万年後には，私たちの現在の文明はほとんど，もしくは何の跡形もないだろう。地球上で最古の建築物の一部，例えばエジプトのピラミッドでも，ほんの 3000 年しか存在していない。オンカロは，人類にとって概念上難しい問題を提起している。解剖学的に言う現代人は，およそ 20 万年存在しているが，最初の人類がどれほど異なっていたか考えてみよう。どうやって彼らとコミュニケーションをとるだろうか。どうやって彼らに自分たちが暮らしている世界を理解させることができるだろうか。10 万年後に人類はどのようになっているだろうか。

　収容する物質がとても危険なため，オンカロの設計者たち，そして多額の費用をかけてこれらの建造物を建設しなければいけないすべての原子力保有国は，これらの問題について考えなければいけない。どうすれば私たちは，人間が将来その場所を掘り返そうとして，人類とその環境に大損害を引き起こすことを防ぐことができるのか。設計者は，「これはとても危険な場所です。近寄らないでください。中に入ろうとしないでください。」のような警告の標識を残すことはできる。しかし，どうやって私たちはそんなにはるか先の人類とコミュニケーションをとれるのか。どの言語を私たちは使うのだろうか。英語か？　中国語か？　こういった言語のどちらも 102012 年には存在しない可能性がある。言語そのものが，その時までにすたれたものになっているかもしれない。絵を使うのはどうか。もしそうするなら，それはどのようなものになるだろうか。

　あるいは，私たちはその場所の危険性について何も目印を残さずに，単に，オンカロがずっと発見されないことを願うべきなのか。私たちは，たとえ警告であっても，目印を残すことで，人間を多かれ少なかれそこに何があるかを知りたい気にさせるのかどうかを考慮しなければならない。再びピラミッドについて考えてみてはどうか。ピラミッドが埋葬用の建造物で，死者のための住処として設計されたのは明らかだ。それらは，あばかれたり，調査されたりするとは考えられていなかったが，それでも

人間はそうしてしまった。しかし，およそ 200 年にわたる発掘の後でさえ，ピラミッドの用途に対する私たちの知識はいまだに不完全で，それはエジプトの象形文字のしくみについての理解と同じようなものだ。人類は生まれつき好奇心の強いものだ。私たちは理解していないものを目にすると，たとえ私たちが調べることで，自分たちや環境に害を及ぼすことになっても，知ろうとするのだ。しかし，オンカロが将来発掘された場合に生じうる壊滅的状況は，単に死者の望みを拒否することや，その信条を軽んじることよりも，ずっと極めて厳しいものになる。事実，もし私たちがこの問題を処理する正しい方法を思いつかないなら，将来，私たちがやったことが正しかったのか間違っていたのかを判断する人間が一人もいないかもしれないのだ。

第２講　重要語彙リスト　＊一つ一つ何度も繰り返して，覚えてください

1	alternative	代わりの
2	nuclear	原子の
3	carbon dioxide	二酸化炭素
4	greenhouse gases	温室効果ガス
5	fossil fuel	化石燃料
6	permanent	永久的な
7	viable	存続可能な
8	long-lasting	長く続く
9	potentially	潜在的に
10	-induced	～に起因する
11	be susceptible to	～を受けやすい
12	biosphere	生物圏
13	minimum	最低限
14	nuclear waste	核［放射性］廃棄物
15	dispose of	処理する
16	material	物質
17	demonstrate	説明する
18	currently	現在
19	geological	地質学の
20	repository	保管場所
21	wind one’s way	うねるように進む
22	bedrock	岩床
23	vault	地下貯蔵室
24	location	場所
25	seal	密閉する
26	intend	意図する
27	prospect	見通し
28	architect	建築家
29	be meant to do	～する意図だ
30	trace	跡
31	conceptual	概念の
32	expense	費用
33	excavate	発掘する
34	massive	大量の
35	obsolete	すたれた
36	burial	埋葬の
37	inquisitive	好奇心のある
38	destruction	破壊
39	extreme	極端な
40	disrespect	軽視する

第２講　音読用白文　①　②　③　④　⑤　⑥　⑦　⑧　⑨　⑩

We often hear about the need to find alternative energy sources in order to protect our planet from the harmful effects of climate change. Wind, wave and solar energy are all possible sources, but most of the electricity produced from non-fossil fuel sources comes from nuclear power. Nuclear energy may be ‘clean’, that is, it does not produce as much carbon dioxide or other greenhouse gases as fossil fuel energy plants, but it is not a permanent energy solution. Like coal and oil, the amount of uranium on earth is limited, and nuclear energy may only be a viable source of energy for the next 100 years. The effects of nuclear energy production, however, are more long-lasting, and potentially more problematic, than any damage that has resulted or could result from fossil fuel-induced climate change: even though building design and technology have improved, nuclear power plants are still susceptible to accidents that can damage whole regions, even countries; they also produce waste that remains harmful to the biosphere for centuries.

In its 57-year history, the nuclear energy industry has so far generated a minimum of 300,000 tons of high-level nuclear waste. In order to be safe, this waste must be kept away from living creatures for at least 100,000 years. How do we dispose of this material safely? An example from Finland demonstrates some of the problems we face. The Finnish government is currently building a deep geological repository, a 5km-long tunnel that winds its way down 400m into the bedrock to a network of storage vaults. The location is called ‘Onkalo’. It will be ready to store waste in 2020, and then sealed in 2120. The Finnish government intends that Onkalo will remain closed for 100,000 years.

That’s a difficult prospect for architects. How do you design something that’s meant to last for such a long time? In 100,000 years, there will be little or no trace of our present civilization. Some of the oldest buildings on earth, the Egyptian pyramids, have been around only for about 3,000 years. Onkalo presents a difficult conceptual problem for humans: anatomically modern

humans have been in existence for around 200,000 years, but think how different the first humans would have been. How would you communicate with them? How could you make them understand the world in which you live? What will humans be like in 100,000 years?

Since the material to be stored is so dangerous, the designers of Onkalo — and all nuclear nations that must build these structures, at great expense — have to think about these issues. How can we prevent humans from trying to excavate the site in the future, causing massive damage to their species and their environment? The designers could leave a warning sign, something like ‘This is a very dangerous place. Stay away. Do not try to enter.’ But how can we communicate with humans so far in the future? Which language would we use? English? Chinese? It’s probable that neither of these languages will exist in the year 102012. Language itself might have become obsolete by that time. How about using a picture? If so, what would it be?

Alternatively, should we not leave any markers about the site’s dangers, and simply hope that Onkalo remains undiscovered? We must consider whether leaving a marker, even a warning, would make humans less or more curious to find out what’s there. We can think about the pyramids again. It’s clear that these were designed as burial structures, houses for the dead. They were not intended to be opened and explored, but humans did so anyway. But even after around 200 years of excavation, our knowledge of the pyramids’ purpose is still incomplete, as is our understanding of the Egyptian hieroglyphic system of writing. Humans are by nature inquisitive: if we see something we don’t understand, we have a need to find out, even if our investigations are damaging towards ourselves and the environment. But the destruction that could result if Onkalo were excavated in the future is much more extreme than simply rejecting the wishes of the dead or disrespecting their beliefs. In fact, if we don’t think of the right ways to manage the problem, there may not be any humans in the future to judge whether what we did was right or wrong.

第３講　　解答

＜解答＞

設問(1)　ⓐ ロ　ⓑ ハ　Ⓒ イ　ⓓ 二

設問(2)　(ⅰ) ロ　(ⅱ) ハ　(ⅲ) ハ

設問(3)　会話の相手

設問(4)・(5)　全訳の下線部②・③を参照。

設問(6)　外国での振る舞い方に関して顧客にアドバイスをする企業経営のトレーナー

設問(7)　二

＜全訳＞

適応理論では，人が互いに話をする際に，その話題，状況，会話に参加している他の人たちを考慮する（自分を適応させる）ために，振る舞いや話し方を調節すると言われている。簡単な例を２つ取り上げよう。人は外国人にはよりゆっくり話して，幼児とふれ合っているときは，赤ちゃん言葉を使う。人とコミュニケーションをとる方法は，問題となっている社会的相互作用の中核をなす。それゆえ，友人同士や恋人同士（特に友人や恋人になる過程の人々）は，話し方，なまり，口調，話題において，合わせようとあらゆる努力をする。逆に，距離を取りたい，あるいは異議を唱えたいと思っている人は，相手側の話し方とはあえて異なる話し方を，ほぼいつも選ぶだろう。

こういった考えが重要なのは，いたるところで移民や外国人が経験している困難は，ある部分，彼らの話し方の相違や，コミュニケーションを取ろうとするときに，母語の話者に「合わせる」という能力の限界から生じているのが明らかだからだ。②世界のグローバル化が加速度的に進み，特に南半球から北半球への人々の大規模な移住が続くにつれて，諸問題，そしてたいていの場合摩擦が増えていく。適応理論は，その表面上の単純さにもかかわらず，どのようにミスコミュニケーションや誤解が生じるのか，そしてどうやって問題を改善できるかということに対する洞察を与えてくれる。

コミュニケーションの難しさは，いたるところにいる移民や外国人に影響を与えるだけではない。それらは私たち自身の同胞にも影響する。階級，知性，地位に関する社会的な期待や信頼は，なまりや他の話し方の特徴に影響されるので，ある階級や地域出身の人は，若いころに身につけたコミュニケーションの方法によって求職の際に，

（特に故郷から離れていると）不利になる可能性がある。

このように，適応能力の欠如は，特定の状況で，何らかの外集団とみなされたどんな集団に属する人にとっても問題のもととなるのだ。

適応理論は，1970 年代初頭に，ハワード・ジャイルズによって考案されたもので，彼のコミュニケーションに対する最初の洞察は，母国のウェールズの診療所で働いているときに生まれた。彼は，「私が医師のところまで連れて行った患者は，口を開けて話をせざるをえなかったので，③その後医師が彼らにどう対応するかを予測することができた。」と書いている。彼が開発した考えは，広告主や政党政治の研究者が，ターゲットとする層にメッセージを届ける最も効果的な方法を考える際に，そして企業経営のトレーナーが，依頼人に外国での振る舞い方を助言する際に応用されてきた。

適応能力の限界は，後者によって示されている。研究によると，日本人実業家の見込み客またはパートナー候補を喜ばせるために，過度に適応した西洋人実業家によってなされた努力は，実は逆効果になることが判明した。危険なのは，相手の真似をともなうように思える振る舞いは，ばかにしているように映る可能性があり，少なくとも，見下しているように見えてしまうことだ。日本人の場合，日本の実業家は，外国人が外国人らしくあることを好み，それゆえに，おそらく彼らには自分たちの期待に応えて，自分たちが意図していたやり取りの仕方に従ってもらう方がよいと思った。

適応理論が特に価値を発揮するのは，とりわけ移民社会を受け入れ国の社会に統合する方法を考える際で，そこでは，「統合」とは同化と多文化主義との中間にある言葉で，経済的に成功しようとする間，移民が受け入れ国の社会とうまくやっていく方法を提供することを意味する。大規模な移住によって，移民にあらゆる適応を期待するのは無駄だと認識されるようになった。そしてそれが，医療，教育，社会福祉事業，治安維持，司法サービスを提供する現場で，言語的，文化的要素を考慮するという受け入れ側の社会の調整につながっている。

第 3 講　重要語彙リスト　　＊一つ一つ何度も繰り返して，覚えてください

1	accommodation	適応
2	take account of	～を考慮する
3	be engaged with	～に関わる
4	interact with	～とやり取りをする
5	at issue	問題になっている
6	make efforts	努力する
7	converge in	～（同じ方向に）にまとまる
8	immigrant	移民
9	migration	移住
10	hemisphere	半球
11	for all	～にもかかわらず
12	insight	洞察力
13	identify A as B	A を B とみなす
14	given	特定の
15	devise	考案する
16	patient	患者
17	predict	予測する
18	apply	応用する
19	party politics	政党政治
20	get O across to ～	O を～に伝える
21	illustrate	説明する
22	the latter	後者
23	counterproductive	逆効果の
24	mimicry	真似
25	mockery	嘲笑
26	condescending	見下す
27	presumably	おそらく
28	conform to	～に一致する
29	assimilation	同化
30	neutral	中立の
31	get along with	～と仲良くやる
32	mass	大量の

第３講 音読用白文 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Accommodation theory states that when people talk to each other, they adjust their behaviour and manner of speech to take account of (to accommodate themselves to) the topic, the circumstances, and the other people engaged with them in the conversation. For two simple examples: people talk more slowly to foreigners, and use baby talk when interacting with infants. The way people communicate with each other is central to the kind of social interaction at issue. Thus, friends or lovers (and especially people in the process of becoming friends or lovers) make every effort to converge in manner, accent, tone and topic. Conversely, someone wishing to keep his distance or disagree will almost always adopt a manner of speaking expressly different from that of the other party.

These ideas matter because it is clear that the difficulties experienced by immigrants and foreigners everywhere arise in part from the difference of their speech mannerisms, and the limits to their ability to "converge" with native speakers when trying to communicate. As the world globalizes further at an increasingly rapid pace, and as major migrations of people, especially from the southern to the northern hemisphere, continue, so the problems and too often the frictions increase: accommodation theory, for all its surface simplicity, gives insights into how miscommunication and misinterpretation happen and how matters can be improved.

Communication difficulties do not only affect immigrants and foreigners everywhere. They affect our own fellow-citizens. Social expectations and beliefs about class, intelligence and status are influenced by accent and other speech mannerisms, and therefore certain people from certain classes or regions can be disadvantaged when seeking jobs (especially away from their home localities) by the methods of communicating they learned when young.

Lack of accommodation is thus the source of problems for members of any group identified in given circumstances as an out-group of some kind.

Accommodation theory was devised in the early 1970s by Howard Giles,

whose first insights into communication came while working in a medical clinic in Wales, his native country. He wrote, “The patients I took to the physicians just had to open their mouths and speak and I could predict the manner in which the physicians were going to deal with them.” The ideas he developed have been applied by advertisers and party-political researchers in thinking about the most effective ways of getting messages across to target audiences, and by business management trainers advising clients on how to behave in foreign countries.

The limits of accommodation are illustrated by the latter. Studies found that efforts made by Western businessmen who over-accommodated in order to please potential clients or partners among Japanese businessmen were in fact counterproductive. The danger is that behaviour which appears to involve mimicry of another can look like mockery, or at very least appear condescending; in the Japanese case, the businessmen from Japan preferred the foreigners to be foreigners — and thus, presumably, to meet their own expectations and to conform to their own planned mode of interaction.

Accommodation theory is of particular value for, among other things, thinking about ways of integrating immigrant communities into host communities, where “integration” is a term neutral between assimilation and multiculturalism, and just means providing a way for immigrants to get along with the host community while succeeding economically. With mass immigration has come the realization that it is ineffective to expect immigrants to do all the accommodating; and that has resulted in host community adjustments to take account of linguistic and cultural factors in front-line provision of health care, education, social work, policing and legal services.

第４講　解答

＜解答＞

問１　(1) 快楽反応や，それに関連する体の動きを引き起こすには，音楽に中程度のシンコペーションが必要であるということ。

(3) 脳が必ずしも楽しめていない仕事に取り組んでいるときに，全く無害なものが突然腹立たしくなる状況のこと。

問２　全訳の下線部(2)(4)を参照。

問３　①，⑥

問４　[ア] far　[イ] In(By)　[ウ] best

問５　[あ] ②　[い] ①　[う] ②　[え] ②

＜全訳＞

多くの人が，試験勉強中であろうと乗り物の運転中であろうと，あるいは読書中であろうとも，作業中に音楽を聞く。こうした人の多くがバックグラウンドミュージックのおかげで集中できると主張する。

しかし，なぜだろう。それについて考えてみても，あまり意味をなさない。二つのことに集中すると，なぜ集中力が低下するどころか，高まるのだろうか。音楽をかけていないともっと気が散るとすら，言う人もいる。そこでは何が起こっているのか。

そもそも，脳が音楽を好む理由は明らかではないが，そうであることは明らかだ。興味深いことに，脳が好む音楽の特質を持った，特定の領域が存在する。マリア･ウィテックと同僚による実験では，次のことが明らかになっている。人の快楽反応とそれに関わる体の動きを引き起こすために，音楽には中程度のシンコペーションが必要だということだ。これを簡単な英語で表すとこうだ。人が踊りたくなるほど気に入るためには，音楽はファンキーである必要はあるが，過度にファンキーではいけないということだ。

おそらくあなた自身の経験は，これを支持するだろう。メトロノームを聞いているような単純で，単調なリズムはあまり面白くはない。そのようなものでは，シンコペーションの程度が低く，踊りたくはならない。対照的に，フリージャズのような混沌とした予測のつかない音楽は，高度なシンコペーションがあるので，極端に気が散り，

あるとしてもめったに踊りたくはならない。

予測可能な場合と混沌とした場合の中間地点が，ちょうどよく，脳もこれを強く好む。間違いなく，現代のほとんどのポップミュージックがこの領域のどこかにある。

もっとも，音楽によってなぜ私たちは集中できるのだろうか。理由の一つは，注意力に関するものだ。

驚くべき能力があるにも関わらず，脳は，抽象的な情報を理解するために進化してはおらず，また，長期間一つのことについて考えたりするために進化してもいないのだ。私たちには，二つの注意力のシステムがあるように思える。(2)集中したいと思うものに注意を向けることができる意識的なものと，私たちの感覚で重要かもしれないと思うものに注意を向ける無意識のものだ。無意識のものは，より単純でもっと根本的なもので，高度な推論力よりむしろ感情の処理に関連している。それはまたより速く反応する。よって，家に一人でいるときに騒音が聞こえると，それが何であるかわかるずっと前に，それに注意を向けている。それは避けられないことだ。

困ったことに，意識的に注意を向けることが手元の作業に集中している間に，無意識に注意を向ける仕組みが機能しないわけではないのだ。それはずっと機能しており，補助的な感覚で重要なものをチェックしているのだ。そして，もし私たちがやっていることが不快であったり退屈であったりするのなら，また，その状態で強制的に注意をそれに固定したままにしなければならないとしたら，無意識に注意を向ける仕組みはいっそう強くなる。これはすなわち，注意を他のものにそらすために，気を散らすものが刺激的である必要はないということだ。

あなたは今までに，間仕切りのないオフィスでとても重要な仕事に取り組んでいたが，同僚がずっと鼻をすすっていたり，コーヒーをすすっていたり，爪を切ったりする音で，だんだんと気が狂いそうになったことはあるだろうか。脳が必ずしも楽しめていない仕事に取り組もうとすると，全く無害なものが，突然腹立たしいものになる。

そのような状況では音楽がとても役に立つツールになる。音楽は嫌にならない音や楽しい感情をもたらし，気をそらそうとする無意識に注意を向ける仕組みを，効果的に中立にする。それは，幼い子供に邪魔をされずある作業を終えようとする間に，新しいおもちゃを彼らに与えるようなものだ。

しかし，それは単に，気が散るものを寄せ付けないようにするため，昔なじみのどんなバックグラウンドノイズでも良いという問題ではない。たくさんの会社がピンクノイズ，すなわちホワイトノイズより耳障りではないものを使おうとしており，それ

を職場で流すことで，気が散るのを減らしたり，生産性を高めたりしようとしているのだ。しかし，この方法が効果的であるかに関する見解は，賛否両論ある。

ノイズ，すなわち音楽が重要であることは明らかに思える。このことは，明白に思えるかもしれない。なぜなら，仕事中にクラシックを聴く人は全く異常とは思われないだろうが，もしスラッシュメタルを聞いているなら，実に変に思われるだろう。

音楽の性質やスタイルは脳に明確な反応を引き起こすことができるが，研究の中には，それは実際には個人の趣向によると示すものもある。好きな音楽は集中力を高めるが，そうではない音楽は集中の妨げとなる。(4)人によって音楽の好みが極端に違うことを考慮すると，職場や教室で一種類の音楽をかけると，明らかにプラスマイナス入り混じった結果となるだろう。

音楽はまた感情に大きな影響を与える。本当に暗い音楽は，仕事への情熱を弱める可能性がある。他に注意すべき点は，ノリの良い歌詞の音楽だ。歌詞のない音楽が，仕事中により適しているというのは，人間の話や言葉は，脳が特に注意を向けるものだからだ。

第４講 重要語彙リスト ＊一つ一つ何度も繰り返して，覚えてください

1	go so far as to do	～しさえする
2	distracting	気が散る
3	spectrum	領域
4	property	特質
5	medium	中間の
6	elicit	引き出す
7	back up	支持する
8	monotonous	単調な
9	chaotic	混沌とした
10	rarely, if ever,	あるとしてもめったに～ない
11	entice O to do	O をそそのかして～させる
12	sweet spot	成功できるような状況
13	for all	～にもかかわらず
14	evolve	進化する
15	take in	理解する
16	abstract	抽象的な
17	prolonged	長期の
18	peripheral	補助的な
19	potent	効力を発する
20	stimulate	刺激する
21	divert	そらす
22	sniff	鼻をすする
23	sip	～を飲む，すする
24	innocuous	無害な
25	infuriate	激怒させる
26	neutralise	中立化する
27	disturb	邪魔をする
28	keep O at bay	O を寄せ付けない
29	boost	高める
30	be down to ～	～のせいだ
31	impede	邪魔をする
32	given ～	～を考慮すると
33	expose A to B	A を B にさらす
34	end up with ～	～に終わる
35	sap	弱める
36	enthusiasm	熱意

第４講 音読用白文 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Many people listen to music while they're carrying out a task, whether they're studying for an exam, driving a vehicle or even reading a book. Many of these people argue that background music helps them focus.

Why, though? When you think about it, that doesn't make much sense. Why would having two things to concentrate on make you more focused, not less? Some people even go so far as to say that not having music on is more distracting. So what's going on there?

It's not clear why the brain likes music so much in the first place, although it clearly does. Interestingly, there's a specific spectrum of musical properties that the brain prefers. Experiments by Maria Witek and colleagues reveal that there needs to be a medium level of syncopation in music to elicit a pleasure response and associated body movement in individuals. What this means in plain English is: music needs to be funky, but not too funky, for people to like it enough to make them want to dance.

Your own experience will probably back this up. Simple, monotonous beats, like listening to a metronome, aren't really entertaining. They have low levels of syncopation and certainly don't make you want to dance. In contrast, chaotic and unpredictable music, like free jazz, has high levels of syncopation, can be extremely off-putting and rarely, if ever, entices people to dance.

The middle ground hits the sweet spot between predictable and chaotic, for which the brain has a strong preference. Most modern pop falls somewhere within this range, no doubt.

Why would music help us concentrate, though? One argument is to do with attention.

For all its amazing abilities, the brain hasn't really evolved to take in abstract information or spend prolonged periods thinking about one thing. We seem to have two attention systems: a conscious one that enables us to direct our focus towards things we know we want to concentrate on and an unconscious one that shifts attention towards anything our senses pick up

that might be significant. The unconscious one is simpler, more fundamental, and linked to emotional processing rather than higher reasoning. It also operates faster. So when you hear a noise when you're alone at home, you're paying attention to it long before you're able to work out what it might have been. You can't help it.

The trouble is, while our conscious attention is focused on the task in hand, the unconscious attention system doesn't shut down; it's still very much online, scanning for anything important in your peripheral senses. And if what we're doing is unpleasant or dull — so you're already having to force your attention to stay fixed on it — the unconscious attention system is even more potent. This means that a distraction doesn't need to be stimulating to divert your attention on to something else.

Have you ever worked in an open-plan office and been working on a very important task, only to be driven slowly mad by a co-worker constantly sniffing, or sipping their coffee, or clipping their nails? Something quite innocuous suddenly becomes much more infuriating when you're trying to work on something your brain doesn't necessarily enjoy.

Music is a very useful tool in such situations. It provides non-invasive noise and pleasurable feelings, to effectively neutralise the unconscious attention system's ability to distract us. It's much like giving small children a new toy to play with while you're trying to get some work done without them disturbing you.

However, it's not just a matter of providing any old background noise to keep distractions at bay. A lot of companies have tried using pink noise — a less invasive version of white noise — broadcasting it around the workplace to reduce distractions and boost productivity. But views on the effectiveness of this approach are mixed at best.

It seems clear that the type of noise, or music, is important. This may seem obvious: someone listening to classical music while they work wouldn't seem at all unusual, but if they were listening to thrash metal it would be thought very strange indeed.

While the nature and style of the music can cause specific responses in the brain, some studies suggest that it really is down to personal preference. Music you like increases focus, while music you don’t impedes it. Given the extreme variation in musical preferences from person to person, exposing your workforce or classroom to a single type of music would obviously end up with mixed results.

Music also has a big impact on mood — truly bleak music could sap your enthusiasm for your task. Something else to look out for is music with catchy lyrics. Musical pieces without words might be better working companions, as human speech and vocalisation is something our brains pay particular attention to.

Ⓒ RECRUIT
本サービスに関する知的財産権その他一切の権利は著作権者に帰属します。
また本サービスに掲載の全部または一部につき無断複製・転載を禁止します。